

FET, A-I.

Mathematical Reviews  
Vol. 14 No. 10  
Nov. 1953  
Analysis

7-15-54  
LV

(3) math

Fet, A. I. On the algebraic number of closed extremals on a manifold. Doklady Akad. Nauk SSSR (N.S.) 88, 619-621 (1953). (Russian)  
Let  $R$  be a closed manifold whose  $m-1$  first Betti groups (mod 2) vanish and whose  $m$ th Betti group contains at least one element of even order. The author's main result is that, given any positive regular variational problem for curves on  $R$ , the algebraic number of closed extremals is not less than 3; and further that there exist either continuum-many closed extremals of equal length, or else 3 closed extremals of indices  $m-1$ ,  $2(m-1)$ ,  $3(m-1)$ . This generalizes an earlier result in which  $R$  was assumed to be a 2-sphere [same Doklady (N.S.) 66, 347-350 (1949); these Rev. 11, 47]. The tools needed for this extension include a lower estimate of the "length" (mod 2), in the sense of Froloff and Elogol, [Mat. Sbornik 42, 637-642 (1935)], of the space of closed non-oriented curves on  $R$ . This "length", and also the Lusternik-Schnirelmann category, are shown to be not less than 3. L. C. Young (Madison, Wis.).

FET, A. I.

USSR/Math. - Topology

Card 1/1

Author : Fet, A. I.

Title : Generalization of the "Lusternik-Shnirel'man" Theorem on the covering of spheres and of some other theorems connected with the former.

Periodical : Dokl AN SSSR, 95, 6, 1149 - 1151, 21 Apr 1954

Abstract : The article analyses the Lusternik-Shnirel'man theorem on the covering of spheres where the reflection condition, in respect to the centers, is changed into an arbitrary condition for involute reflection of spheres upon themselves. Some other theorems related to the one just mentioned are also considered.

Institution : V. A. Steklov, Math. Institute of the Acad. of Scs. of the USSR

Submitted : 25 Feb 1954

FET, A. I.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp. There are 11 references, all of them USSR.

Likhtenbaum, I. M. (Moscow). Characteristic Numbers of Improper Graph. 135-136

Smirnov, Yu. M. (Moscow). On the Extension of Topological Spaces. 136

Smirnov, Yu. M. (Moscow). On Metrisation of Local Compact Spaces Which are Decomposable into the Sum of Countable Number of Sets With Countable Bases. 136-137

Mention is made of Aleksandrov, P. S. and Uryson, P. S.

Fet, A. I. (Novosibirsk). Calculus of Variations in the Large. 137

Mention is made of Lyusternik, L. A., Shnirel'man, Shvarts, A. S., Al'ber, S. I. and Pontryagin, L. S.  
Card 44/80

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000412920015-7

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000412920015-7"

FET, A.I.

SUBJECT USSR/MATHEMATICS/Functional analysis CARD 1/2 PG - 475  
 AUTHOR FET A.I.  
 TITLE The space of analytic functions and its application to the  
 Cauchy-Kowalevski problem.  
 PERIODICAL Uspechi mat.Nauk 11, 2, 215-222 (1956)  
 reviewed 1/1957

The author shows that the class  $A$  of functions being uniformly convergent in the unit circle, can be changed in a  $K$ -space (see Kantorovič "functional analysis") such that a corresponding convergence inside of the unit circle is identical with the uniform convergence. This permits the application of general function-theoretical schemes for the theorem of S.Kowalevski too. The author proves that the problem

$$(1) \quad \frac{\partial u_i}{\partial t} = \sum_{j=1}^N \sum_{k=1}^n a_{ij}^{(k)} \frac{\partial u_j}{\partial x_k} + \sum_{j=1}^N b_{ij} u_j + c_i$$

$$u_i(0, x_1, \dots, x_n) = 0 \quad (i=1, \dots, N)$$

$(a_{ij}^k, b_{ij}, c_i)$  are analytic functions of the real variable  $t, x_1, \dots, x_n$  in  $|t| < a, |x_i| < a$  ( $i=1, \dots, n$ ) can be solved by successive approximations as

Uspechi mat.Nauk 11, 2, 215-222 (1956)

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follows: Let  $u_i^{(0)}$  be an arbitrary system in the neighborhood of the zero point of analytic functions; let the functions  $u_i^{(1)}$  ( $i=1, \dots, N$ ;  $l=1, 2, \dots$ ) be defined by

$$u_i^{(l+1)} = \int_0^t \left\{ \sum_{j=1}^N \sum_{k=1}^n a_{ij}^{(k)} \frac{\partial u_j^{(l)}}{\partial x_k} + \sum_{j=1}^N b_{ij} u_j^{(l)} + c_i \right\} dt \quad (l=0, 1, 2, \dots).$$

Then there exists a neighborhood  $|t| \leq b_1$ ,  $|x_k| \leq b_1$  in which for  $l \rightarrow \infty$  the  $u_i^{(l)}$  converge uniformly to the analytic functions  $u_i$ . The functions  $u_i$  form the single solution of (1) in the region of analytic functions. Furthermore it is asserted that (1) is correct in the K-space, i.e. from the convergence of the initial functions there follows the convergence of the solutions.

FET, A.I.

SUBJECT USSR/MATHEMATICS/Theory of functions  
 AUTHOR FET A.I., BODREZOVA L.B.  
 TITLE Functions with simple niveau lines.  
 PERIODICAL Mat. Sbornik, n. Ser. 38, 303-318 (1956)  
 reviewed 12/1956

CARD 1/2

PG - 443

In the plane domain  $G$  let be defined a real function  $F(p) = F(x, y)$ . The function can assume finite and infinite values and be continuous (from  $p_n \rightarrow p_0$  there follows  $F(p_n) \rightarrow F(p_0)$ ). The set  $F_0$  of all points of  $G$  in which  $F(p) = c$  is called the set with niveau  $c$  of the function  $F(p)$ . The point  $p^*$  is an ordinary point of  $F(p)$  if  $p^*$  possesses an arbitrarily small neighborhood which from all sets with niveau  $c$  is cut in a simple arc (or is cut not at all). Else  $p^*$  is critical. If all critical points are isolated, then the function is called simple. The authors prove that in the neighborhood of each point  $p$  a simple function by corresponding homeomorphisms can be transferred into one of the following functions:

$F = x$  if  $p$  is an ordinary point;

$F = R(x+iy)^m$  ( $m > 1$ ) if  $p$  is a saddle point (i.e. critical point but no extremum);

$F = \pm(x^2+y^2)$  if  $p$  is a point of the relative maximum or minimum;

$F = \pm \ln(x^2+y^2)$  if  $p$  is a pole ( $F(p) = \pm \infty$ ).

Mat. Sbornik, n. Ser. 38, 303-318 (1956)

CARD 2/2

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Demanding that  $F$  possesses no points of relative extremum, then one obtains the class of the pseudo-harmonic functions. It shall be remarked that an infinitely often differentiable function must not be "simple" in the authors' sense. For the proof of their theorems the authors use conformal mappings and results as well as notions of Suvorov (Mat. Sbornik, n. Ser. 33, 73-100 (1953); Uspechi mat. Nauk 11, 3, (1956)).

INSTITUTION: Novosibirsk.



20-6-10/59

AUTHOR  
TITLE

FET, A.I.  
The Absolute Minimum in a Two-Dimensional Parametric Problem  
on a Manifoldness (Absolutnyy minimum v dvumernoy parametri-  
cheskoy zadache na mnogoobrazii.- Russian)  
Doklady Akademii Nauk SSSR 1957, Vol 113, Nr 6, pp 1224-1226  
(USSR)

PERIODICAL

ABSTRACT

First of all reference is made to some relevant preliminary papers. The author of the paper under review then proves the existence of an absolute minimum for an arbitrary positively regular problem on the manifoldnesses  $M$  of the Morrey type. For the compact manifoldnesses the solution is obtained without any metrical restrictions; for the noncompact manifoldnesses corresponding conditions are introduced in the infinite. If  $M$  is a Euclidian space, then we obtain from the results found here the theorem by Sigalov, and in the case of the Plateau problem we obtain the Morrey theorem. In the paper under review, the author employs the method devised by A.G. Sigalov instead of the Courant method. In this context, the solution is obtained as the boundary value of a uniformly convergent minimizing sequence, something where Morrey failed. The paper under review is limited to the case of a boundary contour and also does not

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The Absolute Minimum in a Two-Dimensional Parametric Problem on a Manifoldness.

tend towards minimum prerequisites on the smoothness of  $M$ .

Let  $M$  be a differentiable manifoldness, the local coordinates of which are connected by means of the transformations  $y^i = y^i(x^1, \dots, x^n)$  ( $i = 1, 2, \dots, n$ ). In this context, the first derivations of the  $y^i$  of the Lipschitz condition are sufficient. (Manifoldness of the smoothness  $C_1^1$ ). On  $M$  the metric tensor  $g_{ij}$  be given. The concept of the unambiguous regularity of such metrics is defined. Now let there be defined on  $M$  the function  $F(p, \mathcal{L}_p)$  of the point  $p$  and of the simple bivector  $\mathcal{L}$  in the point  $p$ . In coordinate representation,  $F$  is written in the following way:  $F(x^1, \dots, x^n; \Lambda^{12}, \dots, \Lambda^{n-1} n) = F(x, \Lambda)$ . /Note by reviewer: the latter formula is written in this form also in the Russian text/. In this context,

$$\Lambda^{ij} = \begin{vmatrix} a^i & a^j \\ b^i & b^j \end{vmatrix} \quad (i \neq j) \text{ are the components of } \mathcal{L}_p.$$

Some conditions are given for  $F$ , and then several concepts are defined.

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The Absolute Minimum in a Two-Dimensional Parametric Problem  
on a Manifoldness.

Then the main theorem of the paper under review is given with  
the corresponding lemmata. (No reproduction)

ASSOCIATION: Electrotechnical Institute for Telecommunications Novosibirsk.  
PRESENTED BY: P.S. Aleksandrov, Member of the Academy, 27.11. 1956  
SUBMITTED: 16.11. 1956  
AVAILABLE: Library of Congress.

CARD 3/3

FET, A.I.

Extremum problems for surfaces of bounded Gaussian curvature.

Dokl. AN SSSR 153 no.2:292-295 N '63. (MIRA 16:12)

1. Institut matematiki s vychislitel'nyy tsentrom Sibirskogo  
otdeleniya AN SSSR. Predstavleno akademikom S.L.Sobolevym.

FET, A.I.

Stability theorems for nearly spherical convex surfaces.  
Dokl. AN SSSR 153 no.3:537-539 N '63. (MIRA 17:1)

1. Institut matematiki s vychislitel'nym tsentrom Sibirskogo  
otdeleniya AN SSSR. Predstavleno akademikom S.L. Sobolevym.

FET, A.I.; KUZNETSOV, Yu.V., red.

[Textbook for a course in "Higher mathematics": the theory of probability and the elements of information theory] Uchebnoe posobie po kursu "Vysshaya matematika: teoriya veroyatnostei i elementy teorii informatsii."  
Moskva, Vses. zaachnyi energ. in-t, 1964. 229 p.  
(MIRA 18:2)







LAGUNOV, V.N.; FET, A.I.

Extremum problems for surfaces of a prescribed topological type.  
Part 2. Sib. mat. zhur. 6 no.5:1026-1036 S-O '65. (MIRA 18:10)

I. 05273-57 EWT(d)/EWP(i) IJP(c) BB/GG

ACC NR: AR6023997

SOURCE CODE: UR/0372/66/000/003/G042/G042

AUTHOR: Ilovayskiy, V. S.; Lozovskiy, V. S.; Fet, Ya. I.

TITLE: Use of address language to automate the synthesis of digital computers

SOURCE: Ref. zh. Kibernetika, Abs. 3G315

REF SOURCE: Sb. Vychisl. sistemy. Vyp. 18. Novosibirsk, 1965, 34-71

TOPIC TAGS: computer language, memory address, algorithm, *digital computer*

ABSTRACT: One of the possible methods of automating the synthesis of the symbolic circuit of digital computers on the basis of a specified system of instructions is considered. An algorithm (A) for transition from the recording of computer instructions in the address language to a symbolic circuit in the form of a system of logic equations is proposed. The starting premise for constructing A is the condition of the performance of all the instructions by a single device. A applies to the construction of the symbolic circuits of computers for which the following starting characteristics are specified: number of memory elements, capacity of each memory element and method of access; method of presentation of numbers, format of numbers; addressability; method of presentation of modified instructions; system

Card 1/2

UDC: 62-506:681.142:621.3.001.1:51

L 05273-67

ACC NR: AR6023997

of instructions; principle of organization of the time flowchart; duration of every operation, expressed in conditional units. The operation of A is illustrated by describing the synthesis of an elementary computational system. 13 illustrations, 10 tables. Bibliography of 10 titles. Yu. U. [Translation of abstract]

SUB CODE: 05, 09/

Card

2/2 *eqh*

L 05274-67 EWT(d)/EWP(1) IJP(c) BB/GG  
ACC NR: AR6023998 SOURCE CODE: UR/0372/66/000/003/G042/G042

AUTHOR: Fet, Ya. I.

44  
B

TITLE: Certain algorithms for digital computer design 160

SOURCE: Ref. zh. Kibernetika, Abs. 3G316

REF SOURCE: Sb. Vychisl. sistemy. Vyp. 18. Novosibirsk, 1965, 72-91

TOPIC TAGS: algorithm, computer design, circuit design, *digital computer*

ABSTRACT: The possibilities of using digital computers to automate the conversion from the symbolic circuit to the schematic diagram (SD) during computer design are considered. An algorithm for the logic simulation of symbolic circuit is described, and the block diagram of a program is presented. Algorithms allowing, on the basis of a system of logic equations, the construction of SD for transistor-diode elements of a specific type are described. SD are constructed for the case where: the combination network is realized through superpositions of 2-stage circuits; each logic element is represented by a set of  $m$  coincidence circuits with  $n$  conditions; the functions of these elements and their inversions are produced at the logic-element outputs; along with each input variable there exists its inversion; the load capacity

Card 1/2

UDC: 62-506:681.142:621.3.001.1:51

L 05274-67

ACC NR: AR6023998

of the sources of the input variables is unrestricted. 9 illustrations. Bibliography of 9 titles.  
[Translation of abstract]

SUB CODE: 09/

Card

2/2

*egk*

I. 14287-66 EWT(m)/ENP(j)/T IJP(c) WW/RM

ACC NR: AP6011235 (A) SOURCE CODE: UR/0413/66/000/006/0075/0075

INVENTOR: Kolesnikov, G. S. ; Rodionova, Ye. F. ; Levin, B. B. ; Fetin, I. N. <sup>39</sup>  
B

ORG: none

TITLE: Method of obtaining phosphorus-containing copolymers. <sup>1</sup> Class 39,  
No. 179922 /  
2

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 75

TOPIC TAGS: copolymer, copolymerization, styrene, organic phosphorus compound

ABSTRACT: An Author Certificate has been issued for a method of obtaining phosphorus-containing copolymers by copolymerization of styrene with unsaturated organophosphorus compounds in block or solution at temperatures of 50 to 120C in the presence of a dinitrile azoizobutyric acid as the initiator. To increase the variety of unsaturated organophosphorus compounds,  $\alpha$ -phenyvinylphosphinic acid is used as the initiator. [NT]

SUB CODE: 11/07/SUBM DATE: 18Jun63/

Card 1/1 mjs

UDC: 678.85:678.746.22.547.341

I. 44138-66 EWT(m)/WTF(j)/T IJP(c) WW/BM

ACC NR: AP6013276

SOURCE CODE: UR/0413/66/000/008/0078/0078

INVENTOR: Rogovin, Z. A. ; Tyuganova, M. A. ; Zharova, T. Ya. ; Levin, B. B. ; Fetin, I. N.

ORG: none

TITLE: Preparation of graft copolymers of cellulose and phosphorus-containing monomers, Class 39, No. 180792

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 78

TOPIC TAGS: copolymer, graft copolymer, monomer, cellulose, *primary aromatic amine, heat resistant material*

ABSTRACT: This Author Certificate introduces a method for obtaining graft copolymers of cellulose and phosphorus-containing monomers by introducing aromatic amines into the cellulose molecule and subsequently converting them to diazo groups.

Card 1/2

UDC: 677.46:678..029.65:66.095.834 66.095.2

L 44188-66

ACC NR: AP6013276

To extend the variety of heat-resistant and ion-exchange materials,  $\alpha$ -phenylvinyl-phosphinic acid is suggested as the phosphorus-containing monomer. [LD]

SUB CODE: 11,07/SUBM DATE: 27Feb65/

Card 2/2 *amp*



FET, Ya. I.

AID P - 4532

Subject : USSR/Electronics  
Card 1/2 Pub. 90 - 5/10  
Authors : Simontov, I. M. and Ya. I. Fet  
Title : Evaluation of selective properties of resonant systems  
Periodical : Radiotekhnika, 2, 54-59, F 1956  
Abstract : The author discusses a method of evaluating the selective properties of resonant systems. The method is based on a comparison of the relative power of oscillations of the error spectrum with the relative power of oscillations of the useful spectrum. The author introduces and defines, a concept of the "coefficient of rectangularity" as one of the criteria of selectivity. He presents a comparative evaluation of some resonant systems and states that the use of other criteria leads to erroneous conclusions. Four diagrams, 2 tables, 5 Soviet references (1939-1951).

AID P - 4532

Radiotekhnika, 2, 54-59, F 1956

Card 2/2 Pub. 90 - 5/10

Institution : None

Submitted : F 12, 1955

L 00365-66 EWT(d)/T/EED-2/EWP(1) IJP(c) BB/03

ACCESSION NR: AP5021615

UR/0286/65/000/013/0092/0092

AUTHORS: Kantorovich, L. V. <sup>44</sup> Fet, Ya. I. <sup>44</sup>

TITLE: <sup>166, 44</sup> Computer system consisting of a general purpose digital computer and a <sup>40</sup>  
small computer. Class 42, No. 172567 <sup>38</sup>

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 92

TOPIC TAGS: computer system, digital computer

ABSTRACT: This Author Certificate presents a computer system consisting of a general purpose digital computer and a small digital computer. The small computer contains a high speed arithmetic device with an operational memory unit with small capacity of trigger registers, a control microprogram unit, and a semiconstant memory unit for the normal program. To increase the effective response rate of this system by supplying a significant portion of the operations to the small computer, to broaden the class of problem solvable by the system by dividing the functions between the general purpose and small machines, and to utilize in the system any general purpose machine without significant changes in its design, the command decoder output of the general purpose machine is connected through a matching device to the unit input of the blocking trigger whose zero output is

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L 00365-66

ACCESSION NR: AP5021615

connected through a matching device to the cycle pulse gate of the general purpose machine. The command decoder output is connected through a matching device to the first input of a gate whose second input is connected to the zero output of a trigger-distributor. The output of this gate is connected to the first inputs of the beginning address gates of the argument block in the operational memory unit of the general purpose machine, to the first inputs of the beginning address gates of the normal subprogram in the semiconstant memory unit of the small machine, and to the first inputs of the cycle number index gates of the normal subprogram. The second inputs of the index gates are connected through a matching device to the digit outputs of the address portion of the command register of the general purpose machine. The outputs of these gates are connected respectively to the one inputs of the address register triggers of the operational memory unit of the general purpose machine. The outputs of these triggers are connected through a matching device to the address code shaper of the general purpose machine and to the one inputs of the command address register triggers of the small machine. The outputs of these triggers are connected to the address decoder of the semiconstant memory unit of the small machine and to the one inputs of the cycle counter triggers of the normal subprogram. The counter output is connected to the zero inputs of the trigger-distributor and blocking trigger. The outputs of the code shapers of the general purpose machine are connected through a matching device to the first inputs of a group of number admission gates whose second inputs are connected to the

I. 00365-66

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ACCESSION NR: AP5021615

output of the control microprogram device and whose outputs are connected to the inputs of the arithmetic device registers of the small machine. The outputs of the arithmetic device registers are connected to the first inputs of a group of number distribution gates whose second inputs are connected to the output of the control microprogram device and whose outputs are connected through a matching device to the code shaper inputs of the general purpose machine. The output of the cycle generation of the small machine is connected to the first input of gate whose second input is connected to the one input of a synchronizing trigger and whose output is connected to the first input of a cycle pulse collecting circuit. The output of the cycle generator of the general purpose machine is connected through a matching device to the first input of a gate whose second input is connected to the zero output of the synchronizing trigger and whose output is connected to the second input of the cycle pulse collecting circuit. The inputs of the synchronizing trigger are connected to the outputs of the control microprogram device. The output of the cycle pulse collecting circuit is connected to the input of the microcommand counter of the small machine.

ASSOCIATION: Institut matematiki, SO AN SSSR (Institute of Mathematics, SO AN SSSR)

SUBMITTED: 02 Nov 63  
NC REF SOV: 000

ENCL: 00  
OTHER: 000

SUB CODE: DP

Card 3/3

ACC NR: AP7001438

(A,N)

SOURCE CODE: UR/0413/66/000/021/0159/0159

INVENTORS: Kantorovich, L. V.; Fet, Ya. I.; Ilovayskiy, I. V.

ORG: none

TITLE: Summator for simultaneous addition of several binary terms. Class 42, No. 188151 /announced by Institute of Mathematics, Siberian Division AN SSSR (Institut matematiki Sibirskogo otdeleniya AN SSSR)/

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 159

TOPIC TAGS: adder, binary number, coincidence circuit

ABSTRACT: This Author Certificate presents a summator for simultaneous addition of several binary terms with storage of the transfers and accumulation of the results, consisting of single-digit triple-input summators. To increase the response rate, the outputs of the combination circuits of each of the single-type p-digit units of the summator are connected through coincidence circuits digit by digit to the inputs of the intermediate result storage register of the given unit. The outputs of the digit groups of the intermediate result storage register are connected through coincidence circuits and auxiliary storage units digit by digit to the inputs of the corresponding digits of each unit of the summator. The outputs of the new term registers are connected digit by digit to the free inputs of the summator units. To generate the total sum in normal form with minimal additional equipment cost, the

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UDC: 681.142.07

ACC NR: AP7001438

lowest output channels of the combination circuit of each unit are connected digit by digit through coincidence circuits to the inputs of the intermediate result storage register of the given unit. The following output channels of the combination circuit of each unit are connected digit by digit through coincidence circuits to the inputs of the intermediate result storage register of the given unit and also to the inputs of the first group of coincidence circuits of the highest unit. The outputs of the corresponding digits of the new term registers are connected to the first inputs of the second group of coincidence circuits of each summator unit. The outputs of the first and second groups of coincidence circuits are connected to the inputs of the corresponding accumulation circuits whose outputs are connected to the free inputs of the corresponding digits of the following highest unit. A storing summation signal is fed to the second inputs of the second groups of coincidence circuits of all units. An assimilation signal is fed to the second inputs of the first groups of coincidence circuits of all units. To increase the response rate, the outputs of the combination circuit of each unit are connected through the first group of coincidence circuits to the inputs of the first intermediate result storage register of the given unit and through the second group of coincidence circuits to the inputs of the second intermediate result storage register of the given unit. The outputs of the first register are connected through the third group of coincidence circuits to the first inputs of the accumulation circuits. The outputs of the second register are connected through the fourth group of coincidence circuits to the second inputs of the accumulation circuits. The inputs of the accumulation circuits are connected digit by digit to the corresponding inputs of the given and following summator units.

SUB CODE: 09/ SUBM DATE: 15Mar65

Card 2/2

FETCU, C., Dr.; GHERASE, C., chimist; DUMBRAVA, E., sora.

Renal function in epidemic hepatitis. Med. int., Bucur.  
4 no.8:1162-1167 Dec 56.

1. Lucrare efectuata in Spitalul de stat -- Orasul Stalin.  
(HEPATITIS, INFECTIOUS, physiol.  
kidney funct. tests)  
(KIDNEY FUNCTION TESTS, in various dis.  
hepatitis, infect.)



FETCU, Elena, ing.; VORONCA, Al., ing.

Application of radioactive isotopes in exploring coal deposits by  
wells in Rumania. Rev min 13 no.11:488-498 N '62.

1. T.P.E.M.

COTIGARU, Buium, ing.; IONESCU-MUSCEL, Mircea, ing.; FETEANU, Gheorghe  
Packaging functions. Industria usocara 9 no.11:479-483 N '62.

**PETROVICH, I.I.**

Anniversary session by the Scientific Council in the All-Union Scientific Research Institute dedicated to the 40th anniversary of the Great October Socialist Revolution. Ugol' 33 no.3:47-48 Mr '58. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut.  
(Russia--Revolution, 1917-1921)

BUCHNEV, Valer'yan Konstantinovich, prof., doktor tekhn. nauk,  
[deceased]; BRONNIKOV, Dmitriy Mikhaylovich, doktor tekhn.  
nauk; VASIL'CHIKOV, Nikolay Vasil'yevich, kand. tekhn. nauk;  
GANZEN, Georgiy Aleksandrovich; SHUSTOV, Nikolay Vasil'yevich;  
FETEROVICH, Izrail' Izraylayich, inzh.; DEMIDYUK, G.P., otv.  
red.; BURTSEV, L.I., otv. red.; KOROLEVA, T.I., red. izd-va;  
OSVEYENKO, V.G., tekhn. red.; PROZOROVSKAYA, V.L., tekhn. red.

[Handbook on drilling boreholes in underground workings] Spra-  
vochnik po bureniu shpurov i skvazhin na podzemnykh rabotakh.  
[By] V.K.Buchnev, i dr. Moskva, Gosgortekhzdat, 1962. 271 p.  
(Boring) (MIRA 15:12)

FETEROVICH, I.I.

Methods of estimating the resistance of coals to breaking in  
connection with problems of technical norms. Gor. i ekon. vop.  
razrab. ugol'. i rud. mest. no.1:346-363 '62. (MIRA 16:7)  
(Coal--Testing)

FETEROVICH, I.I., inzh.

Hardness of coals and the technical production norms of cutters  
and cutter-loaders. Nauch. soob. IGD 15:129-136 '62.  
(MIRA 17:2)

KAMINSKIY, I.N., kand. ekonom. nauk; LABKOVSKIY, B.Ye., kand. ekonom. nauk; FETEROVICH, I.I., kand. tekhn. nauk; PINSKIY, S.Ye., inzh.; TYURKINA, N.I., inzh.; KHODOS, G.I., inzh.; KHELEMENDIK, V.G., inzh.; LERNER, Yu.I., inzh.

Problem of a standard structure of management, standard staffs, and norms on the number of engineers, technicians and employees in coal mines. Ugol' 40 no.8:60-65 Ag '65.

(MIRA 18:8)

1. Institut gornogo dela im. A.A. Skochinskogo (for all except Khodos, Khelemendik, Lerner). 2. Donetskij nauchno-issledovatel'skiy ugol'nyy institut (for Khodos, Khelemendik). 3. Gosudarstvennyy institut po proyektirovaniyu shakht v yuzhnykh rayonakh SSSR (for Lerner).

L 52107-65 EPF(c)/EWP(j)/EWT(m) Pc-4/Pr-4 RM

PC015239

7/1/66/65/000/009/0002/0022

TOPIC TAGS: ester, phosphinic acid, alkylphosphinic acid, alkylene oxide, phenylvinylphosphinic acid

ABSTRACT: This Author Certificate presents a method for obtaining phosphinic acid esters by interacting warmed alkylphosphinic acids with alkylene oxides. To broaden the assortment of the esters, alkylphosphinic acids are replaced by  $\alpha$ -phenylvinylphosphinic acid. An alternate process may be conducted at 120-135C.

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta khimicheskoy promyshlennosti pri gosplane SSSR (Enterprise of the State Committee of the Chemical Industry at the Gosplan SSSR)

SUBMITTED: 30Sep63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 1/1788



I 14011-66 : EWT(m)/EPF(c)/BWP(j)/T/ETC(m) RPL WU/UM

ACCESSION NR: AP5021399

UR/0286/65/000/015/0080/0081

AUTHORS: <sup>44.5</sup> Tevlina, A. S.; <sup>44.5</sup> Kotlyarova, S. V.; <sup>44.5</sup> Levin, B. B.; <sup>44.5</sup> Fetin, I. N. <sup>39</sup>

TITLE: Method for obtaining grafted copolymers. <sup>44.5</sup> Class 39, No. 173407 <sup>B</sup>

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 80-81

TOPIC TAGS: graft copolymer, copolymerization, fire resistant material

ABSTRACT: This Author Certificate presents a method for obtaining grafted copolymers by copolymerization of vinyl monomers with polymers or copolymers of  $\alpha$ -olefin in bulk at high temperatures in the presence of peroxide or azo-initiators. To obtain fire resistant copolymers having ion exchange properties, the process of copolymerization is carried out in the presence of  $\alpha$ -phenylvinylphosphinic acid. <sup>7</sup>

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva (Moscow Chemical Engineering Institute) <sup>44.5</sup>

SUBMITTED: 26Jun63

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 000

OTHER: 000

UDC: 678.71/74

Card 1/1 

L 3554-66 EWT(m)/EPF(c)/EWP(j)/I/ETC(m) RPL WM/RM  
 ACCESSION NR: AP5024400 UR/0286/65/000/015/0081/0081  
 44.55 44.5 44.55 37  
 AUTHORS: Levin, B. B.; Kolesnikov, G. S.; Rodionova, Ye. F.; Fatin, I. N. B  
 TITLE: A method for obtaining copolymers of vinylpyrrolidone (vinylpyridine).  
 Class 39, No. 173408 15  
 SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 81.  
 TOPIC TAGS: copolymer, vinylpyridine, monomer, copolymerization  
 ABSTRACT: This Author Certificate presents a method for obtaining copolymers of vinylpyrrolidone (vinylpyridine) with a vinyl monomer by copolymerizing appropriate monomers in a block or in a solution at the temperature of 50-100C in the presence of azoisocleic dinitrile initiator. To increase the heat and fire resistance of the polymer,  $\alpha$ -phenylvinylphosphinic acid is used as vinyl monomer. 15  
 ASSOCIATION: none 7  
 SUBMITTED: 11Nov63 ENCL: 00 SUB CODE: 00, 4C  
 NO REF SOV: 000 OTHER: 000  
 Card 1/1 *over*

(A) L 11138-66 EWT(m)/EWP(j)/T/ETC(m) RPL WW/RM

ACC NR: AP6002550 SOURCE CODE: UR/0286/65/000/023/0047/0047

INVENTOR: <sup>44 55</sup> Levin, B. B.; <sup>44 55</sup> Kolesnikov, G. S.; <sup>44 55</sup> Rodionova, Ye. F.; <sup>44 55</sup> Fetin, I. N.

ORG: none

TITLE: Preparation of acrylic or methacrylic acid copolymers. Class 39, No. 176682

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 47

TOPIC TAGS: copolymer, acrylic acid, methacrylic acid, heat resistant material, fire resistant material

ABSTRACT: An Author Certificate has been issued for a preparative method for copolymers of acrylic or methacrylic acid with vinyl monomers. The method involves bulk or solution copolymerization at 50—100C in the presence of azobisisobutyronitrile. To improve the heat- and fire-resistance of the polymer, (α-phenylvinyl)phosphonic acid is used as the vinyl monomer. [80]

SUB CODE: 07, 11/ SUBM DATE: 17Jul63/ ATD PRESS: 4173

Card 1/1 UDC: 678.744.322.13

L 24704-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM

ACC NR: AP6009535 (A) SOURCE CODE: UR/0413/66/000/005/0070/0070

INVENTOR: Levin, B. B.; Fetin, I. N.

ORG: none

TITLE: Method for obtaining a phosphorus-containing homopolymer.  
Class 39, No. 179469

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5,  
1966, 70

TOPIC TAGS: phosphorus containing polymer, monomer, polymerization,  
homopolymer

ABSTRACT: An Author Certificate has been issued describing a method  
for obtaining a phosphorus-containing homopolymer by using initiated  
block polymerization of an unsaturated acid at temperatures exceeding  
the melting point of a monomer. To expand the variety of phosphorus  
containing heat-resistant polymers,  $\alpha$ -phenyl-vinyl-phosphic acid is  
used as the unsaturated acid. [NT]

SUB CODE: 11, 07/

SUBM DATE: 03Nov64/

Card 1/1FW

UDC: 678.746.87

L 32764-66 EWT(m)/EWP(j)/T IJP(c) RM  
 ACC NR: AP6009877 (A) SOURCE CODE: UR/0413/66/000/004/0069/0069

INVENTOR: Andrianov, K. A.; Levin, B. B.; Rodionova, Ye. F.; Fetin, I. N. 37  
 B

ORG: none

TITLE: Preparation of phosphorus-containing polymers. Class 39, No. 178985 15

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 69

TOPIC TAGS: polymer, phosphorus containing polymer, copolymerization

ABSTRACT: An Author Certificate has been issued describing a method of preparing phosphorus-containing polymers by initiated copolymerization of vinyl monomers and phosphorus compounds. To broaden the variety of phosphorus polymers, the monoester of alpha-phenylvinylphosphinic acid is suggested as the phosphorus compound. [LD]

SUB CODE: 11/ SUBM DATE: 11Nov64

Card 1/1 BLG

UDC: 678.746.87-13.002.2

AKOPYAN, A.A., kand.tekhn.nauk; FETIN, V.P., kand.tekhn.nauk; YAROSHENKO,  
A.I., inzh.

Combination dischargers for 500 kv. networks and their test results.  
Elek.sta. 33 no.2:54-59 F '62. (MIRA 15:3)  
(Electric power distribution)(Electric protection)

24880

S/109/61/006/007/020/020  
D262/D306

24.7900

AUTHOR: Fetina, V.N.

TITLE: Ferro-resonance even-harmonics generation

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 7, 1961,  
1207, 1208

TEXT: It is suggested that the reason for the presence of an even harmonic in a practical electrical circuit is due to the hysteresis character of the magnetization curve. It is stated that no clear physical interpretation of the mechanism of generation of higher even harmonics exists in literature. It is stated that the results of the author's experiments permit a few remarks to be made as to this mechanism. The harmonics have to be assumed as unstable which also should be true for a hysteresis symmetrical characteristic of a real non-linear element. On the other hand, when this symmetry is affected by one reason or another, an even harmonic of the current appears in the cct and it resonates. The symme-

Card 1/4

Ferro-resonance even-harmonics ...

24880

S/109/61/006/007/020/020  
D262/D306

try may be destroyed e.g. because of the distortions present in the sinewave applied to the cct. As a result, the similarity between the ascending and descending branch of the magnetization curve is destroyed and the second harmonic starts to resonate at a certain amplitude of external source. In observing this, phenomenal curves of Fig. 1 may be obtained. The region of 2nd harmonic generation and its resonant value are as expected from the above reasoning. If the asymmetry of the loop is compensated by introducing small constant shifts or by applying a signal with less distortions, the generation for the same conditions does not occur. It appears again, however, at large amplitudes of external source, the amplitude of the  $2\omega$  component becomes quite large with random initial phase. It seems, therefore, as if the stability of even higher harmonics in this case were due to the destruction of the symmetry of a hysteresis loop by transient processes. A second possible reason for stability may be the presence in the cct with a ferromagnetic core, of a variable equivalent loss resistance which at frequencies below  $\omega_{res}$  increases linearly with the magne-

Card 2/4



Ferro-resonance even-harmonics ...

24880

S/109/61/006/007/020/020

D262/D306

tizing field. It is stated in conclusion that the above ideas are tentative only and require further study. There are 2 figures and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova, kafedra teorii kolebaniy (Moscow State University im. M.V. Lomonosov, Faculty of Physics, Department of Theory of Oscillations)

SUBMITTED: March 9, 1961

Card 3/4

FETINA, V.N.

Calculation of ferroresonance, taking magnetic reversal losses into account. Vest. Mosk. un. Ser. 3: Fiz., astron. 16 no.6: 32-37 N-D '61. (MIRA 14:12)

1. Kafedra teorii kolebaniy Moskovskogo universiteta.  
(Electric circuits)  
(Electric resonators)

FETINA, V.N.

Results of the experimental study of low-frequency noises of  
narrow germanium p-n junctions. Radiotekh. i elektron. 8  
no.10:1796-1797 0 '63. (MIRA 16:10)

MARINESCU, V., prof.; SETIAGEC, D.; MALITCHI, E.; LITARCNECK, G.; PETIONE, B.

Some aspects of our experience in cardiac surgery. Rumanian M.

Rev. 3 no. 3:25-36 J1-S '59.

(HEART SURGERY)

FETISENKO, I.I.

Pneumatosis of the appendix in a six-year old child. Khirurgiia  
32 no.10:82-83 0 '56 (MIRA 12:7)

1. Iz kafedry detskoy khirurgii (zav. - prof. S. D. Ternovskiy)  
II Moskovskogo meditsinskogo instituta imeni Stalina (dir. - dotsent  
S.I. Milovidov).

(APPENDIX, dis.

pneumatosis cystoides in six-year-old child)

FETISENKO, I.I.

Treatment of clavicular fractures in children. Khirurgiya  
39 no.5:36-40 My '63. (MIRA 17:1)

1. Iz kafedry detskoy khirurgii (zav. - prof. S.Ya.  
Doletskiy) Tsentral'nogo instituta usovershenstvovaniya  
vrachey i 2-y Klinicheskoy detskoy bol'nitsy imeni I.V.  
Rusakova (glavnyy vrach - zasluzhennyy vrach RSFSR V.A.  
Kruzhkov).

USTIMENKO, Yevgeniy Martynovich; FETISENKO, I.I., red.

[Cancer of the penis] Rak polovogo chlera. Moskva, Meditsina, 1964. 147 p. (MIRA 17:11)

KUBIKOV, V.F.; FETISENKOV, I.V.

Reconversion of temporary railroad bridges. Put' i put.khoz. 5  
no.4:28 Ap '61. (MIRA 14:7)

1. Nachal'nik Dorogobuzhskoy distantzii Kalininskoy dorogi (for  
Kubikov). 2. Mostovoy master, st. Dorogobuzh, Kalininskoy dorogi  
(for Fetisenkov):

(Railroad bridges)



FETISENKOV, I.V., mostovoy master; NIKIFOROV, L.P., inzh.

Deepened ditches. Put' i put.khoz. 7 no.1:12 '63.

(MIRA 16:3)

1. Dorogobuzhskaya distantziya Moskovskoy dorogi.  
(Railroads—Earthwork)

FETISHCHEV, B.I.

Mechanized production line in sawing particle boards. Der. prom.  
14 no.4:28 Ap '65. (MIRA 18:5)

Fetiskina, Ye. I.

BARYKIN, Aleksey Mikhaylovich; LAPIDUS, Lev Grigor'yevich; LOSEVA, Nina Leonidovna; TORMOZOVA, L.I., redaktor; NOVIKOV, Ye.M., inzhener, retsenzent; FETISKINA, Ye. I., inzhener, retsenzent; STEPANOVICH, I.P., kandidat tekhnicheskikh nauk, redaktor; EL'KINA, Ye.M., tekhnicheskii redaktor

[Technology of processing fur] Tekhnologiya izdelii iz mekha.  
Moskva, Gos.nauchno-tekhn.izd-vo Ministerstva tekstil'noi pro-  
myshl. SSSR, 1955. 285 p.

(MLRA 9:4)

(Fur)

FETISOV, A. P.

42505. Podgotovka Zimovki Ovets V Sovkhozakh Tresta Turkmensoxkhozkarakul'.  
Kararulevodstvo I Zverovodstvo, 1948, No. 6, S. 15-17.

FETISOV, A. G.

Fetisov, A. G. "The scientific creative road of Professor Andrey Gregor'yevich Savinykh" (Surgeon, On the 30th anniversary of his medical and public activity), Sbornik trudov, posvyashch. prof. Savinykh, Tomsk, 1948, p. 7-11.

So: U-3261, 10 April 1953 (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

FETISOV, A. G.

Fetisov, A. G. and Khlopkov, A. M. "On late and early bougie introduction in esophagus burns due to corrosive chemicals", Sbornik trudov, posvyashch. prof. Savinykh, Tomsk, 1948, p. 196-203.

So: U-3261, 10 April 1953 (Ietopis 'Zhurnal 'nykh Statey, No. 12, 1949).

FETISOV, A. G.

37658 O gistologicheskoy striktуре i gistogeneze yunosheskikh fibrom  
moso i goltki trudy tojskogo med. in-ta im. molotova, t. XV, 1949, s. 206-19

SO: Letopis' Zhurnal'nykh Statей vol. 17, 1949

FETISOV, A. [G.]

4. Respiratory Organs - Diseases

7. "Diseases of the upper respiratory tract and of the ear". D. I. Zimont. Reviewed by A. Fetisov. Vest. oto-rin., 14, No. 2 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.



**FETISOV, A.G., professor.**

Otoryngological education in medical schools and institutes of  
postgraduate training. Vest.oto-rin 17 no.4:12-15 J1-Ag '55.  
(MLRA 8:10)

1. Iz kliniki bolezney ukha, gorla i nosa Tomskogo meditsinskogo  
instituta.

(OTORINOLARYNGOLOGY, education,  
in Russia)

FETISOV, A.G., professor

"Otorhinolaryngology graphically presented for the polyclinic and outpatient physician" by G.A. Smirnov. Reviewed by A.G. Fetisov.  
Vest. oto-rin. 19 no.1:112-113 Ja-F '57 (MLRA 10:4)  
(OTORHINOLARYNGOLOGY) (SMIRNOV, G.A.)

FETISOV, A.G., prof.

Review of V.A. Zagorianskaia's book "Anatomy, physiology, and practical  
methods for studying the cochlear and vestibular analysors." Vest.  
otorin. 21 no.5:102-103 S-O '59. (MIRA 13:1)  
(EAR--INNERVATION) (ZAGORIANSKAIA, V.A.)

GOL'DBERG, D.I., prof., otv. red.; ZIVERT, K.N., prof., red.; MASYUKOVA, Ye.M., dots., red.; FETISOV, A.G., prof., red.; SHUBIN, N.V., dots., red.; OSOVSKIY, A.T., tekhn. red.

[Problems in surgery of the esophagus and stomach. Biological effect of rays from the 25 Mev. betatron] Voprosy khirurgii pishchevoda i zheludka. Biologicheskoe deistvie luchei betatrona 25 MEV. Tomsk, Izd-vo Tomskogo univ., 1960. 354 p. (MIRA 14:8)

1. Tomsk. Tomskiy gosudarstvennyy meditsinskiy institut.  
(ALIMENTARY CANAL—SURGERY) (RADIATION—PHYSIOLOGICAL EFFECT)

OSIPOV, I.N., prof.; KOPNIN, P.V., dots.; FETISOV, A.G., prof.,  
red.; VOLKOVA, M.I., tekhn. red.

[Basic problems of the theory of diagnosis] Osnovnye voprosy  
teorii diagnoza. Izd.2., dop. i ispr. Tomsk, Izd-vo Tomskogo  
univ., 1962. 188 p. (MIRA 16:7)

(DIAGNOSIS)

1ST AND 2ND COVER										3RD AND 4TH COVER									
PROCESSING AND PROPERTIES INDEX																			
FETISOV, A. I.										11C									
<p>Chromosome doubling by colchicine and crossability of tetraploids in <i>Avena brevis</i> Roth. A. I. Fetisov. <i>Compt. rend. acad. sci. U. R. S. S. S. 27</i>, 705-9 (1940) (in English).—The following expts. were started in March, 1938: (1) treatment of dry seeds of <i>Avena brevis</i>, <i>Hordeum distichum</i> and <i>Triticum durum</i> with 0.2 and 0.1% aq. solns. of colchicine at 0-2°, 16-19° and 30° for 3-16 days, (2) treatment of the embryos at 16-19° with 0.1, 0.05, 0.025 and 0.0125% aq. colchicine solns. for 1, 3 and 5 days (embryos were sepd. from the endosperm after soaking in H<sub>2</sub>O for 24 hrs.), (3) the "method of drops" applied from the moment when the integuments were pierced by the developing embryos. The concns. of the aq. solns. of colchicine were 0.2, 0.1, 0.05 and 0.025%. Germination power of the colchicine-treated seeds was detd. 20 days after the beginning of the treatment. The results (tabulated) show that the germination power depends not so much on the duration of the treatment as on the concn. of the colchicine. The increase from 0.1 to 0.2% reduces it by nearly 50%. Of plants grown from seeds treated with colchicine, 46.3% showed cells with double chromosome sets. Of plants grown from seeds yielded by the plants grown from colchicine-treated seeds 7.8% proved tetraploid. Crossing expts. with <i>Avena brevis</i> and <i>Avena sativa</i> showed that application of colchicine considerably enlarges the range of remote hybridization if experimentally produced tetraploid forms are used as complements in crosses. 6 references. A. H. K.</p>																			
ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND COVER										3RD AND 4TH COVER									
1ST AND 2ND COVER										3RD AND 4TH COVER									

FETISOV, A.I.; SMOLYAN, G.L., redaktor; AKHLANOV, S.N., tekhnicheskii redaktor.

[Demonstration in geometry] O dokazatel'stve v geometrii. Moskva, Gos. izd-vo tekhniko-teoret.lit-ry, 1954. 57 p. (Populiarnye lektsii po matematike no.14) (MIRA 8:4)  
(Geometry)

FETISOV, A.I., redaktor.

[Teaching mathematics in a school in connection with the problems  
of applied science studies] Prepodavanie matematiki v shkole v  
svete zadach politekhnicheskogo obucheniia; sbornik statei.  
Moskva, Akad.ped. nauk RSFSR, 1954. 255 p. (MLRA 8:2D)



NIKITIN, Nikolay Nikiforovich; FETISOV, Antonin Ivanovich; PASELSKIY, S.V.,  
redaktor; RYBIN, I.V., tekhnicheskii redaktor

[Geometry; a textbook for classes 6-9 in the seven-year and secondary  
schools] Geometriia; uchebnik dlia 6-9 klassov semiletnei i srednei  
shkoly. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosve-  
shcheniia RSFSR. Pt.1. 1956. 198 p. (MLRA 9:7)  
(Geometry)

NIKITIN, N.N. (Moskva); FETISOV, A.I. (Moskva)

New geometry textbook "Planimetry." Mat.v shkole no.3:6-8  
My-Je '56. (MIRA 9:8)

(Geometry, Plane)

~~FETISOV, A.I.~~, redaktor; KOPTEKOVA, L.A., redaktor; GARNEK, V.P.,  
tekhnicheskii redaktor

[Teaching of mathematics; a collection of articles] Prepodavanie  
matematiki; sbornik statei pod red. A.I. Fetisova. Izd. 3-e, dop.  
1 ispr. Moskva, 1957. 249 p. (MIRA 10:11)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov  
obucheniya.  
(Mathematics--Study and teaching)

NIKITIN, Nikolay, Nikiforovich; FETISOV, Antonin, Ivanovich; PAZEL'SKIY, S.V.,  
red.; KAPUSTINA, V.S., red.; SMIRNOVA, M.I., tekhn.red.

[Concise practical instructions to accompany the new textbook of  
geometry (Part 1) by N.N.Nikitin and Fetisov; a manual for teachers]  
Kratkie metodicheskie ukazaniia k novomu uchebniku geometrii  
(chast' 1); posobie dlia uchitelei. Izd. 2-oe, perer. Moskva, Gos.  
uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1957. 72 p. (MIRA 11:4)  
(Geometry--Study and teaching)

FETISOV, A.I.

Elements of logic in mathematics teaching. Izv. APN no.92:149-198  
'58. (MIRA 11:6)

(Mathematics--Study and teaching) (Logic)

FETISOV, A.I.

Extracurricular work in mathematics at school. Objects, tasks, and  
importance of extracurricular work in mathematics. Izv. APN no.92:  
231-255 '58. (MIRA 11:6)  
(Mathematics--Study and teaching)

ASHKINUZE, V.G., nauchnyy sotrudnik; GIBSH, I.A., nauchnyy sotrudnik;  
MASLOVA, G.G., nauchnyy sotrudnik; NESHKOV, K.I., nauchnyy  
sotrudnik; NIKITIN, N.M., nauchnyy sotrudnik; SEMUSHIN, A.D.,  
nauchnyy sotrudnik; FETISOV, A.I., nauchnyy sotrudnik; KOSTE-  
LOVSKIY, V.A., red.; TARASOVA, V.V., tekhn.red.

[Teaching mathematics in schools in the 1959/60 school year]  
O prepodavanii matematiki v shkole v 1959/60 uchebnom godu. Pod  
red. A.D.Semushina. Moskva, 1959. 135 p. (MIRA 13:5)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov  
obucheniya. 2. Sektor metodiki prepodavaniya matematiki Instituta  
metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for all  
except Kostelovskiy, Tarasova).  
(Mathematics--Study and teaching)

KUZ'MINA, Serafima Alekseyevna; FETISOV, A.I., red.; GUS'KOV, G.G., red.;  
SHAPOSHNIKOVA, A.A., red.; NOVOSHELOVA, V.V., tekhn.red.

[Demonstrating theorems in the 6th grade geometry course] 0 dokazatel'stve teorem v kurse geometrii VI klassa. Pod red. A.I. Fetisova. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1960. 49 p.  
(MIRA 13:12)

(Geometry—Study and teaching)



PIAZHE, Zh. [Piaget, J.]; BET, E. [Beth, E.]; D'YEDONNE, Zh. [Dieudonne, J.];  
LIKNEROVICH, A. [Lichnerowicz, A.]; SHONE, G. [Choquet, G.]; GAT-  
TEN'O, K. [Gattegno, C.]; FETISOV, A.I. [translator]; TANATAR, I.Ya.,  
red.; DRANNIKOVA, M.S., ~~term. red.~~

[Teaching of mathematics. Translated from the French; manual for  
teachers] Prepodavanie matematiki; posobie dlia uchitelei. Moskva,  
Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1960. 161 p.

(MIRA 14:7)

(Mathematics—Study and teaching)

FETISOV, A.I. (Moskva)

Geometric transformations in the elementary geometry course in  
secondary schools. Mat.v shkole no.4:32-43 J1-Ag '62.  
(MIRA 15:11)

(Geometry—Study and teaching)

17(2,13)

SOV/177-58-11-34/50

AUTHORS: ~~Fetisov, A.V.~~, Lieutenant-Colonel of the Medical Corps,  
and Michnik, M.Ya.

TITLE: The Affection of the Nervous System in Influenza

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 11, p 84  
(USSR)

ABSTRACT: In summer 1957, the authors observed 3 patients suffering from the toxic form of influenza with pronounced phenomena of an affection of the central nervous system. Based on the results obtained, the authors conclude that the pronounced symptoms of the affection of the nervous system resulted from reactive changes of the cerebrum due to influenza intoxication. A long lasting adynamia, general asthenia and vegetative dystonia were the result of steady functional disturbances of vegetative formations of the cerebrum, as well as of the reduction of the biological tonus of the cells of the cortical and subcortical centers.

Card 1/1

MATOV, Viktor Ivanovich; NIKOLAYEV, Oleg Aleksandrovich; ZHDANOVICH,  
Nikolay Semenovich; FETISOV, Aleksandr Vasil'vovich;  
SMOL'NIKOV, N.Ya., red.; BORUNOV, N.I., tekhn. red.

[Digital computer for school use] Uchebnaia tsifrovaia vy-  
chislitel'naia mashina. Moskva, Gosenergoizdat, 1963. 127 p.  
(Biblioteka po avtomatike, no.84) (MIRA 16:12)  
(Electronic digital computers)

1. 16483-65 EWT(d)/T/EED-2/EWP(1) Po-4/Pg-4/Pg-4/Pk-4 IJP(c)/ESD(dp)/SSD/  
AFWL/ASD(a)-5/AFMD(p)/AFETR/AFTC(b) BB/TC

ACCESSION NR AM4046249

BOOK EXPLOITATION

S/

6+1

Matov, Viktor Ivanovich; Nikolarev, Oleg Aleksandrovich; Fetisov, Aleksandr Vasil'yevich; Zhdanovich, Nikolay Semenovich

Digital training computer <sup>166</sup> (Uchebnaya teifrovaya vy'chislitel'naya mashina).  
Moscow, Gosenergoizdat, 1963, 127 p. illus., 24,000 copies printed.  
Series note: biblioteka po avtomatike, vy'p. 84

TOPIC TAGS: digital computer

PURPOSE AND COVERAGE: The book cites the basic principles of building digital computers, describes the principal and functional circuits of a training digital computer, and describes a computer designed by the authors. The book is intended for a wide audience of workers concerned with problems of digital computer technology and can serve as a text for students studying the design of digital computers.

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SUB CODE: DP

SUBMITTED: 30Aug63

NR REF SOV: 000

OTHER: 000

Card 2/2

FETISOV, D.V.

109-4-14/20

AUTHOR: Fetisov, D.V. and Milyutin, V.I.

TITLE: Asymmetry of the Optical System of an Electrostatic Microscope and its Resolving Power. (Asimmetriya opticheskoy sistemy elektrostatcheskogo mikroskopa i yego razreshayushchaya sposobnost')

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.2, No.4, pp. 488 - 493 (USSR)

ABSTRACT: An experimental investigation of the effect of the asymmetry of a lens and of the asymmetry of a system of lenses on the resolving power of an electrostatic microscope is described. The experiments were carried out on the Soviet-made microscope, type  $\mu$ CM-50, which was specially adapted for the investigation; this instrument was described by the author in an earlier work (see Ref. 4). The investigated lens consisted of three diaphragms; the middle diaphragm could easily be removed and its axial position could be changed with respect to the remaining diaphragms. The resolving power of the microscope was first measured as a function of the radial asymmetry (ellipticity) of the aperture of the middle diaphragm. The asymmetry was defined as the difference  $\Delta a$  between the maximum and the minimum diameters of the aperture. It was found that for  $\Delta a$  up to  $4 \mu$ , the Card 1/2 resolving power  $\delta$  is constant and equal to about  $60 \text{ \AA}$ : for

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Asymmetry of the Optical System of an Electrostatic Microscope and its Resolving Power.

$\Delta a$  between 4 and 14  $\mu$   $\delta$  is proportional to  $\Delta a$  and at 14  $\mu$  it is equal to about 100  $\text{\AA}$ . It was also found that  $\delta$  is a linear function of the axial asymmetry of the middle diaphragm and that of the upper diaphragm. In order to achieve  $\delta$  of about 60  $\text{\AA}$ , it was found necessary to preserve the axial symmetry of the upper diaphragm to within 5% and that of the middle diaphragm to 0.4%. In a two-lens system, the axial asymmetry of the projection lens for  $\delta = 60 \text{\AA}$  could be of the order of 1.0 mm, while in a three-lens microscope the asymmetry of the centre lens had to be less than 0.15 mm.

There are 6 figures (3 experimental graphs) and 5 references, of which 2 are Slavic.

SUBMITTED: June 9, 1956.

AVAILABLE: Library of Congress.

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FETISOV, D. V.

109-5-17/22

AUTHOR  
TITLE

PERIODICAL  
ABSTRACT

FETISOV, D.V., MILYUTIN, V.I.  
Adjustment of an Electrostatic Microscope  
(K yustirovke elektrostatičeskogo mikroskopa, Russian)  
Radiotekhnika i Elektronika, 1957, Vol 2, Nr 5, pp 653 - 658 (U.S.S.R.)

With reference to the work of the author in the last issue (Radio-  
tekhnika i Elektronika 1957, Vol 2, Nr 4, pp 488 - 493) he investigates  
in this work the single stages of the adjustment of an optical system  
of a microscope. 1.) The centering of the electrodes of electrostatic  
lenses. It is most purposeful to center outside the microscope column;  
the centers of the lens-electrode apertures are fixed to the rotation  
axis of the lens body by means of an optical microscope. He then de-  
scribes the method developed by A.G. ZAVRAZHIN, for obtaining a rota-  
tion of the lens body. 2.) Adjustment of the microscope lenses. It  
is most useful to displace the first projection lens (intermediary  
lens). First the illumination system with the rigidly fixed objective  
and the second projection lens is adjusted while the intermediary  
lens is switched off. Then follows the intermediary lens and the axis  
of the electron bundle is introduced. 3.) Adjustment of the illumina-  
tion system of the microscope. The variety where the cathode and the  
illumination system are displaced as a whole is the most useful of  
the four mentioned. 4.) The adjustment of the microscope as a whole.

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Adjustment of an Electrostatic Microscope

Here a method is recommended which is based on the change of the field-tension of the objective. This method was tried with the microscope ESM-60 and showed that the control of the adjustment as well as the adjustment itself can be carried out during operation of the microscope without any disturbing effect. It is sufficient if for this purpose an additional graduator with a discharger, or a special slab are introduced into the scheme. (With 8 illustrations and 1 Slavic reference).

ASSOCIATION  
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Not given

9.6.1956  
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SOV/120-58-5-20/32

AUTHORS: Sbitnikova, I.S., Dubinina, Ye.M., Spivak, G.V., Fetisov, D.V.

TITLE: An Attachment to the EEM-75 Emission Electron Microscope for the Visualisation of Surfaces, Using Secondary Electron Emission (Pristavka k emissionnomu elektronnomu mikroskopu EEM-75 dlya vizualizatsii poverkhnostey pri pomoshchi vtorichnoy elektronnoy emissii)

PERIODICAL: Priory i tekhnika eksperimenta, 1958, Nr 5, pp 78-82 and 2 plates (USSR)

ABSTRACT: A description is given of an attachment to the EEM-75 microscope. Using secondary and thermionic emission, both the micro-geometry and the emission pattern of thermal cathodes may be visualised. This means that it is possible to compare the distribution of centres of electron emission with micro-geometry of active thermal cathodes. The surface of thermal cathodes is irradiated by an electron beam from an electron gun which directs the beam at an angle to the surface. The angle between the optical axes of the electron gun and the microscope may be varied between 85 and 45°. This

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An Attachment to the EEM-75 Emission Electron Microscope for the Visualisation of Surfaces, Using Secondary Electron Emission

adjustment may be used to choose the best conditions of irradiation corresponding to the best contrast of the image for different depths within the surface microstructure. A sectional drawing through the entire instrument is shown in Fig.1, in which 1 is the electron gun, 2 is a mechanism for adjusting the angle of the irradiation by the primary beam, 3, 4, are centering devices for the beam, 5 is a table for illuminating diaphragms, 6, 7 are observation windows, 8 is a bellows, 9 is a mechanism for adjusting the angle, 10 is the base, 11 is the cathode, 12 is the focussing electrode, 13 is the anode, 14 is the anode cap, and 15 is a ceramic insulator. The results obtained with this attachment are shown in Figs.3-7. Fig.3 shows the image of an oxide cathode with secondary (a) and thermionic (b) emission. A similar pair of images of an I-cathode is shown in Fig.4 while Fig.5 shows an image of

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An Attachment to the EEM-75 Emission Electron Microscope for the Visualisation of Surfaces, Using Secondary Electron Emission

this cathode with the secondary and thermionic emission images combined. There are 7 figures and 13 references; 9 of the references are Soviet, 1 French and 3 German.

ASSOCIATION: Fizicheskiy fakul'tet MGU (Dept. of Physics, Moscow State University)

SUBMITTED: October 10, 1957.

Card 3/3

Fetisov, D.V.

AUTHORS: Milyutin, V.I., Fetisov, D.V., Raspletin, K.K., 32-1-38/55  
Spektor, F.U., Pochtarev, B.I.

TITLE: Simplified Electrostatic Electron Microscope (Uproshchenyy elektrostatcheskiy elektronnyy mikroskop).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 92-96 (USSR)

ABSTRACT: In this paper the model of the simplified electrostatic microscope for 45 kV (MЭ(M-45) is described. The apparatus consists of two separate parts: the microscope proper with feeding device (700x500x1400 mm) and the vacuum apparatus (700x400x1150 mm). The efficiency of the apparatus amounts to 50-60 Å, while 1500 to 8000-fold electron-optical enlargement is attained in four steps by the potential modification of an intermediary lens. The field of observation has a diameter of 62 mm. The apparatus makes it possible to deal with 5 samples, one after the other, and to take 10 photographs (including stereophotographs), without hereby disturbing the vacuum. By means of this microscope it is also possible to take diffraction- and emission pictures of heated objects. In this case the cathode is replaced by the sample, and another anode

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Simplified Electrostatic Electron Microscope

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is fitted. In the case of the diffraction picture, a number of lenses is taken out. In the vacuum plant the diffusion pump "MM-40-A" and the pre-vacuum pump "BH-461" are fitted. The same device can also be used as a vacuum atomizer, for which purpose it is fitted out with various additional devices. The feeding device of the microscope consists of: 1 rectifier for 50 kV, a device for regulating cathode heating, a voltage regulator, a control board for the microscope and the vacuum plant as well as of the additional devices. (The following additional devices are mentioned: a "Tesla" transformer, a voltage stabilizer, etc.). There are 6 figures and 1 Slavic reference.

AVAILABLE: Library of Congress

Card 2/2 1. Electrostatic microscope-Nomenclature

AUTHORS: Milyutin, V.I., Fetisov, D.V., SOV/48-23-4-5/21  
Raspletin, K.K., Spektor, P.U., Pochtarev, B.I.

TITLE: Small-sized Electrostatic Microscopes.  
(Malogabaritnyye elektrostatische mikroscopy)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1959,  
Vol 23, Nr 4, pp 454 - 458 (USSR)

ABSTRACT: First, mention is made of the electron microscopes produced industrially (EM-3, UEM-100) and the fact is pointed out that simpler and cheaper electrostatic microscopes suffice for a great part of operations. Some small-sized electrostatic microscopes have been developed. Figure 1 shows a 40 kv electrostatic table electron microscope with a 1200-5600fold magnification range and a resolving power of up to 50  $\mu$ . Next, a description is given of the instrument MESM-45, which is being considered for industrial production. The instrument consists of two units: microscope with source of current and vacuum system. The three-part electron accelerator is described, followed by the microscope slide and the lens system. Camera with fluorescence screen and plateholder and ocular tube, which features a 5fold optical magnification, are fitted

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Small-sized Electrostatic Microscopes

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under the lens block. The vacuum system consists of the mechanical pump VN-461 and the diffusion pump MM-40-A. The diagram of the current source of the instrument is shown in figure 5. At a maximum load of 100  $\mu$ A the current fluctuation amounts to 0.005%. Finally, the mechanical construction and applicability are described. There are 5 figures and 2 Soviet references.

Card 2/2

AUTHORS: Kabanov, A.N., Milyutin, V.I., SOV/48-23-4-6/21  
Fetisov, D.V.

TITLE: Electrostatic Analyzer of Electron Velocities up to 75 kv  
(Elektrostaticheskiy analizator skorostey elektronov na 75 kV)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1959,  
Vol 23, Nr 4, pp 459 - 461 (USSR)

ABSTRACT: The further development of electron microscopy requires a study of electron scattering in electron microscopic objects. Such an investigation is carried out with the aid of instruments that make it possible to determine the angle and electron energy distribution upon acting <sup>with</sup> the object. The instruments hitherto employed featured electrostatic lenses and an accelerating voltage of 35-40 kv. A description is given of the difficulties arising in the adequate application of accelerating voltages up to 75 kv. Figure 1 shows the analyzer principle for a 75 kv electron beam, and figure 2 the characteristic curve and geometrical dimensions of the analyzer. In principle, the deflection of an incident beam into an electric field with known strength, and the beam

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Electrostatic Analyzer of Electron Velocities  
up to 75 kv

SOV/48-23-4-6/21

intensity are measured with this instrument. Figure 3 shows a basic circuit diagram of the instrument. Finally, the adjustment ranges of the middle electrode potential are specified. A detailed description of the instrument will be given in a following paper. There are 3 figures.

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**AUTHORS:** Pochtarev, B. I., Raspletin, K. K., 507/40-83-4-7/21  
Fetisov, D. V.

**TITLE:** An Instrument for the Measurement of the Resolving Power  
and the Light Output of Fluorescing Screens (PRS) (Pribor dlya  
izmereniya razreshayushchey sposobnosti i svetootdachi  
fluorestsiruyushchikh ekranov (PRS) )

**PERIODICAL:** Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1984,  
Vol 23, Nr 4, pp 462-466 (USSR)

**ABSTRACT:** The main characteristic feature of technical  
cathodoluminophores is their resolving power. This is  
determined by measuring the minimum distance, at which two  
lines projected on the screen may still be visible as  
separated from each other. The knowledge of the light output  
is equally important when measuring the intensity of a beam.  
In this connection, the spectral distribution of light  
intensity is of great interest. The instrument PRS was  
developed to serve for the determination of the resolving  
power of the light output, and of the spectral intensity  
distribution. It works with 5-30 kv accelerating voltage. The  
instrument makes it possible to investigate the resolving

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